

## Claims

1. Method for the operation of a radio-operated  
5 telecommunication system, in which a mobile unit  
generates and transmits a signal which is provided as  
an access request by the mobile unit to a base  
station, and in which the signal is received by the  
base station and the access request is recognized,  
10 wherein a Hadamard transform is used in the generation  
of the signal in the mobile unit and in the  
recognition of the signal in the base station.
2. Method according to Claim 1, wherein in the generation  
15 of the signal by the mobile unit, a signature is  
generated on the basis of the Hadamard transform and  
multiply repeated, and the base station recognizes the  
signature from the received signal by means of the  
Hadamard transform.  
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3. Method according to Claim 2, wherein the Hadamard  
transform is first applied by the base station to each  
of the repetitions of the signature and the signature  
is then deduced from the results of the applications  
25 of the Hadamard transform (Figure 3).
4. Method according to Claim 3, wherein the results of  
the applications of the Hadamard transform are  
combined in blocks and the signature is then deduced  
30 from the results of the blocks (Figure 4).

5. Method according to Claim 2, wherein the repetitions  
of the signature are first linked to one another by  
the base station and the signature is then deduced  
from the linkages by means of the Hadamard transform  
5 (Figure 5).
10. Method according to Claim 5, wherein the linkages of  
the repetitions are combined in blocks and the  
signature is then deduced from the results of the  
blocks (Figure 6).
15. Method according to any one of the preceding Claims,  
wherein a scrambling code is used by the mobile unit  
in the generation of the signal, and the same  
scrambling code is used by the base station in the  
processing of the signal.
20. Detector for a base station of a radio-operated  
telecommunication system, in which a mobile unit  
generates and transmits a signal which is provided as  
an access request by the mobile unit to the base  
station, and in which the signal is received by the  
base station and the access request is recognized,  
wherein said signal received by the base station is  
25 based on a Hadamard transform, and the detector is  
suitable for the application of the Hadamard  
transform.
30. Detector according to Claim 8, wherein said signal  
received by the base station comprises a signature  
which is based on the Hadamard transform and which is

multiply repeated, the detector comprises a plurality of detector elements which are assigned to the individual repetitions of the signature, and the associated output signals of the detector elements are  
5 linked to one another (Figure 3).

10. Detector according to Claim 8, wherein said signal received by the base station comprises a signature which is based on the Hadamard transform and which is multiply repeated, the detector comprises a plurality of detector elements which are assigned to the individual repetitions of the signature, the associated output signals of the detector elements are linked in blocks, and the output signals of the blocks  
15 are linked to one another (Figure 4).

20. Detector according to Claim 8, wherein said signal received by the base station comprises a signature which is based on the Hadamard transform and which is multiply repeated, the repetitions of the signature are linked to one another, and the detector comprises a detector element to which the output signals of the linkages are supplied (Figure 5).

25. 12. Detector according to Claim 8, wherein said signal received by the base station comprises a signature which is based on the Hadamard transform and which is multiply repeated, the repetitions of the signature are linked to one another, the linkages of the  
30 repetitions are combined in blocks, and the detector comprises a number of detector elements, corresponding

to the number of the blocks, to which the output signals of the linkages are supplied (Figure 6).

13. Base station of a radio-operated telecommunication system, in which a mobile unit generates and transmits a signal which is provided as an access request by the mobile unit to the base station, and in which the signal is received by the base station and the access request is recognized, wherein said signal received by the base station is based on a Hadamard transform, said base station having a detector which is suitable for the application of the Hadamard transform.

14. Radio-operated telecommunication system, in which a mobile unit generates and transmits a signal which is provided as an access request by the mobile unit to a base station, and in which the signal is received by the base station and the access request is recognized, wherein said signal received by the base station is based on a Hadamard transform, and the base station having a detector which is suitable for the application of the Hadamard transform.